Listing of Claims

Claim 1 (currently amended) A method for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

providing a second network that includes two or more subnetworks and a second agent, the second agent including a dynamic tunneling agent; and

registering the mobile node with the second agent such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the first agent information about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent.

Claim 2 (cancelled)

Claim 3 (cancelled)

Claim 4 (currently amended) ~~The~~ A method ~~of claim 1, wherein the first agent~~ for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node and includes a globally accessible redirection agent~~,~~;

providing a second network that includes two or more subnetworks and a second agent; and

registering the mobile node with the second agent such that the mobile mode is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the first agent information about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent.

Claim 5 (currently amended) ~~The~~ A method ~~of claim 1,~~ for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

providing a second network that includes two or more subnetworks and a second agent; and

registering the mobile node with the second agent such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the first agent information about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent; and

wherein the step of registering the mobile node with the second agent further comprises the step of:

registering the mobile node with a third agent associated with one of the subnetworks.

Claim 6 (original) The method of claim 5, wherein the third agent includes a subnet agent.

Claim 7 (original) the method of claim 5, wherein the third agent includes a dynamic host configuration protocol (DHCP) server.

Claim 8 (original) The method of claim 5, wherein the third agent includes a dynamic configuration and registration protocol (DRCP) server.

Claim 9 (original) The method of claim 1, wherein the second agent operates at a network layer.

Claim 10 (currently amended) ~~The~~ A method ~~of claim 1, further comprising~~ for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

providing a second network that includes two or more subnetworks and a second agent;

registering the mobile node with the second agent such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the first agent information about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent; and

providing by the mobile node the globally reachable global care-of address (GCOA) to the first agent.

Claim 11 (currently amended) The method of claim ~~1~~ 10, further comprising

providing another network that includes a corresponding agent; and

providing by the mobile node the globally reachable global care-of address (GCOA) to the correspondent agent.

Claim 12 (currently amended) ~~The~~ A method ~~of claim 1, further~~ for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

providing a second network that includes two or more subnetworks and a second agent;

registering the mobile node with the second agent such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from a home address of the mobile node to another subnework without communicating to the first agent information about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent;

receiving in the first network communication addressed to the mobile node;

intercepting the communication by the first agent;

forwarding, at the first agent, the communication to the globally reachable global care-of address (GCOA);

intercepting the communication by the second agent; and

forwarding, at the second agent, the communication to the mobile node.

Claim 13 (currently amended) The method of claim 12, wherein the step of forwarding the communication to the mobile node comprises the steps of:

encapsulating the communication to include the local care-of address (LCOA) of the mobile node; and

sending the encapsulated communication to the LCOA.

Claim 14 (original) The method of claim 13, further comprising the steps of:

decapsulating the encapsulated communication by the third agent; and

forwarding the decapsulated communication to the mobile node.

Claim 15 (currently amended) ~~The~~ A method ~~of claim 1, wherein the step of providing a second network includes providing~~ for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

providing a second network that includes two or more subnetworks and at least two second agents.; and

registering the mobile node with one of the second agents such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the one second agent information about a security association between the mobile node and the first agent.

Claim 16 (original) The method of claim 15, wherein the step of registering the mobile node comprises the steps of:

providing a mobility server in the second network;

allocating dynamically by the mobility server one of the at least two second agents; and

registering the mobile node with the allocated second agent.

Claim 17 (currently amended) A system for facilitating intra-domain mobility, said system comprising:

a first network that includes a first agent having a home address of a mobile node; and

a second network that includes two or more subnetworks and a second agent, wherein the second agent is programmed to provide the mobile node with a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without

communicating to the second agent information about a security association between the mobile node and the first agent and

wherein the second agent includes a dynamic tunneling agent.

Claim 18 (cancelled)

Claim 19 (original) The system of claim 17, wherein the second agent operates at a network layer.

Claim 20 (original) The system of claim 17, wherein the first network includes a home network.

Claim 21 (original) The system of claim 17, wherein the second network includes a foreign network.

Claim 22 (currently amended) ~~The~~ A system ~~of claim 17,~~ for facilitating intra-domain mobility, said system comprising:

a first network that includes a first agent having a home address of a mobile node;

a second network that includes two or more subnetworks and a second agent, wherein the second agent is programmed to provide the mobile node with a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating information to the first agent about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent; and

wherein the second network includes a third agent associated with one of the subnetworks.

Claim 23 (original) The system of claim 22, wherein the third agent includes a subnet agent.

Claim 24 (original) The system of claim 22, wherein the third agent includes a DHCP server.

Claim 25 (original) The system of claim 22, wherein the third agent includes a DRCP server.